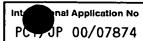


INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference 00-049-PCT		f Transmittal of International Search Report 20) as well as, where applicable, item 5 below.
International application No.	International filing date (day/month/year)	(Earliest) Priority Date (day/month/year)
PCT/JP 00/07874	09/11/2000	09/11/1999
Applicant		
KAO CORPORATION et al.		
This International Search Report has bee according to Article 18. A copy is being tra	n prepared by this International Searching Auth	pority and is transmitted to the applicant
This International Search Report consists It is also accompanied by	of a total of sheets. a copy of each prior art document cited in this	report.
Basis of the report		
	international search was carried out on the bas ess otherwise indicated under this item.	sis of the international application in the
the international search w Authority (Rule 23.1(b)).	ras carried out on the basis of a translation of th	ne international application furnished to this
was carried out on the basis of the	e sequence listing:	ternational application, the international search
	onal application in written form. Irnational application in computer readable form	1.
	this Authority in written form.	
furnished subsequently to	this Authority in computer readble form.	
	osequently furnished written sequence listing do s filed has been furnished.	pes not go beyond the disclosure in the
the statement that the info	rmation recorded in computer readable form is	sidentical to the written sequence listing has been
2. Certain claims were fou	nd unsearchable (See Box I).	
3. Unity of invention is lac	king (see Box II).	
4. With regard to the title,		
the text is approved as su	bmitted by the applicant.	
the text has been establis	hed by this Authority to read as follows:	
5. With regard to the abstract,		
X the text is approved as su		
the text has been establis within one month from the	hed, according to Rule 38.2(b), by this Authorite date of mailing of this international search rep	y as it appears in Box III. The applicant may, ort, submit comments to this Authority.
6. The figure of the drawings to be publ	ished with the abstract is Figure No.	
as suggested by the appli	cant.	X None of the figures.
because the applicant fail		
L because this figure better	characterizes the invention.	





A. CLASSIFICATION OF SUBJECT MATTER IPC 7 C01B39/02 C01B39/14 C11D3/12

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols) IPC 7

C01B

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

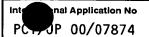
Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

WPI Data, PAJ, INSPEC, COMPENDEX, EPO-Internal

C. DOCUM	ENTS CONSIDERED TO BE RELEVANT	
Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	EP 0 593 014 A (KAO CORP) 20 April 1994 (1994-04-20) claims 1,10 page 13, line 12 - line 23 page 9, line 19 - line 26	1,2,9, 11,12,14
Υ	page 3, 1711c 13 1711c 20	8
X	EP 0 184 244 A (SOLVAY) 11 June 1986 (1986-06-11) claims 1,6,9,10 page 4, line 1 - line 18 page 8, line 6 -page 9, line 2 figure 1	3,5-7, 11,12,14
Y	/	8

X Further documents are listed in the continuation of box C.	χ Patent family members are listed in annex.
Special categories of cited documents: 'A' document defining the general state of the art which is not considered to be of particular relevance 'E' earlier document but published on or after the international filing date 'L' document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) 'O' document referring to an oral disclosure, use, exhibition or other means 'P' document published prior to the international filing date but later than the priority date claimed	 "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art. "&" document member of the same patent family
Date of the actual completion of the international search 14 February 2001	Date of mailing of the international search report 21/02/2001
Name and mailing address of the ISA European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax: (+31-70) 340-3016	Authorized officer Rigondaud, B





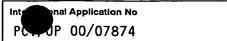
Citation of document, with indication, where appropriate, of the relevant passages EP 0 288 293 A (EXXON CHEMICAL PATENTS INC) 26 October 1988 (1988–10–26) claims 1,3,8,9 page 6, line 22 – line 26 page 7, line 6 – line 12 GB 1 297 140 A (THE BRITISH PETROLEUM COMPANY LIMITED) 22 November 1972 (1972–11–22) the whole document US 4 385 042 A (YAN TSOUNG Y ET AL) 24 May 1983 (1983–05–24) claim 1 column 17, line 17 –column 18, line 38 figure 4	Relevant to claim No. 1,9,12 8 1 2 3,4
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INC) 26 October 1988 (1988-10-26) claims 1,3,8,9 page 6, line 22 - line 26 page 7, line 6 - line 12 GB 1 297 140 A (THE BRITISH PETROLEUM COMPANY LIMITED) 22 November 1972 (1972-11-22) the whole document US 4 385 042 A (YAN TSOUNG Y ET AL) 24 May 1983 (1983-05-24) claim 1 column 17, line 17 -column 18, line 38	8 1 2
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THE FOLLOWING IS THE AMENDMENTS TO THE CLAIMS OF THE INTERNATIONAL APPLICATION UNDER PCT ARTICLE 19:

AMENDED SHEETS (Pages 55, 56 & 57).

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CLAIMS

- 1. A process for preparing fine zeolite particles comprising reacting a silica source with an aluminum source in the presence of an alkaline earth metal-containing compound.
- 2. The process according to claim 1, wherein the alkaline earth metal is Ca and/or Mg, and wherein the alkaline earth metal-containing compound is used in an amount such that an MeO/Al₂O₃ molar ratio is 0.005 to 0.1, wherein Me is Ca and/or Mg.
- 3. A process for preparing fine zeolite particles comprising feeding for reaction an aluminum source and/or a silica source into a circulating line connected to a reaction tank.
- 4. The process according to claim 3, wherein the aluminum source and/or the silica source is fed into the circulating line connecting between an outlet of the reaction tank and an inlet of a mixer.
- 5. The process according to claim 3 or 4, wherein the aluminum source is supplied to the reaction tank and circulated in the circulating line, and wherein the silica source is fed into the circulating line.
- 6. The process according to claim 3 or 4, wherein the silica source is supplied to the reaction tank and circulated in the circulating line, and wherein

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the aluminum source is fed into the circulating line.

- 7. The process according to any one of claims 3 to 6, wherein the aluminum source and the silica source are mixed in the circulating line at a mixing ratio of 0.1 to 3, as expressed by an SiO₂/Al₂O₃ molar ratio.
- 8. The process according to claim 1 or 2, wherein the aluminum source and/or the silica source are fed for reaction into the circulating line connected to the reaction tank.
- 9. The process according to any one of claims 1 to 8, wherein the fine zeolite particles have the general formula in anhydride form:

$$xM_2O \bullet ySiO_2 \bullet Al_2O_3 \bullet zMeO$$
,

- wherein M is an alkali metal; Me is an alkaline earth metal; x is a number of 0.2 to 2; y is a number of 0.5 to 6; and z is a number of 0.005 to 0.1.
 - 10. The process according to any one of claims 1 to 9, wherein the fine zeolite particles have an average primary particle size of 1.5 µm or less.
 - 11. The process according to any one of claims 1 to 10, wherein the fine zeolite particles have a cationic exchange speed of 150 mg CaCO₃/g or more.
- 12. Fine zeolite particles obtainable by the process according to the process of any one of claims 1 to 11.

13. Fine zeolite particles satisfying the relationships:

$$0.6 \le X \le 1.5$$
,

$$20X/3 - 2.4 \le Y \le 15$$
,

5 with proviso that $X \leq Y$,

wherein an average primary particle size is X μm , and an average aggregate particle size is Y μm .

14. A detergent composition comprising the fine zeolite particles of claim 1210 or 13.